INDIVIDUAL EFFORT:

AN

Introductory Lecture,

DELIVERED AT THE OPENING OF

SHELBY MEDICAL COLLEGE,

NOVEMBER 2, 1858.

BY JOHN FREDERICK MAY, M.D.,
PROFESSOR OF THE PRINCIPLES AND PRACTICE OF SURGERY.

Nashville, Tenn.:
PRINTED AT THE SOUTHERN METHODIST PUBLISHING HOUSE.
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CORRESPONDENCE.

PROFESSOR MAY:—Having listened with much gratification and instruction to your very able address, delivered at the opening exercises of our new College, we, the committee appointed by the class, would most respectfully request of you a copy of the same for publication.

E. A. STEVENSON, Arkansas.
JOHN H. CURREY, Tennessee.
J. W. DAVIS, Georgia.
W. C. FENNEL, Alabama.
HENRY ALEXANDER, Mississippi.
Y. A. MATHEWS, North Carolina.
A. G. QUARLES, Kentucky.
JOHN W. JONES, Louisiana.

Shelby Medical College, Nov. 3, 1858.

GENTLEMEN:—I have received your note asking for the publication of my Introductory Address.

I comply with your request, and thank you for your favorable expression in regard to the lecture.

Very truly your friend,

JOHN FREDERICK MAY.

To Messrs. E. A. Stevenson, John Henry Currey, etc., etc., etc.,
Committee of Medical Class.

INDIVIDUAL EFFORT.

GENTLEMEN:—In accordance with a time-honored custom, and in compliance with the wishes of my colleagues in Shelby Medical College, I rise to announce to you the inauguration of its regular course of lectures, and to welcome you to its halls. We this day dedicate a new temple to the noblest of all sciences, and, standing as yet upon its threshold, we invite you to enter with us into its various apartments, in each to separate the glowing truths of scientific research from the erring theories and false hypotheses that have been mingled with them; to unfold to your admiring gaze the beauties and the wonders of the human organization; to explain to you the aggregate of those phenomena which constitute life, and the admirable perfection and harmony of the laws that preside over and govern them; to make you acquainted with the perversion of these laws, and the various diseases which are consequent upon their derangement; to bring before you the numerous remedial agents by whose means these same laws may be reädjusted, and the integrity of the organization be restored; to demonstrate to you the beautiful truths of that science whose laboratory, though the universe itself, yet draws renovating principles from even the sponge of ocean's depths, or the fragile weed which is borne upon its billow's foam; and to expound to you those conservatory principles by a knowledge of which the hand may be carried safely through parts where lesion would be fatal, to stay the aneurismal flood, or to extirpate the forming seeds of death.

On such an occasion, gentlemen, it would be idle affectation in me to pretend to the exemption of those emotions that are naturally incident to the responsible position I have assumed in this institution. I am about to enter upon a duty which imposes a vast weight of responsibility, and which surrounds me with all the difficulties attendant upon a great

task. The true acquisition of knowledge in any important science is always attended with toil and with sacrifices; but to impart successfully that knowledge to others, however thoroughly it may have been attained by its possessor, demands qualities so various and so elevated, that they are well calculated to impress him, if not with mistrust, at least with anxious solicitude to discharge well and honorably the duties of so high and responsible a trust. I stand before you as yet a stranger, and with a new field of useful action before me; and the feelings of pride and gratification which I might, under other circumstances, entertain at this time, are calmed and subdued by reflections of a more impressive nature: by stirring hopes that I may be to you a successful expounder of those noble principles whose object is the relief of the physical infirmities and sufferings of our fellow-men; by anxious hopes that I may accomplish for you *all* that I so earnestly desire.

But, gentlemen, though a stranger to most of you, I feel that I may hail you as my friends, and to them and to you, students of the noblest, because the most useful, science that can claim the human intellect, I pledge my humble yet my best efforts to the support of the chair which I have the honor to hold in this institution, whose birth we have this night assembled to celebrate, and assure you that my exertions shall be unceasing and undivided in the discharge of its responsible duties, and in the advancement of your medical education.

The great characteristic of the present age is its wonderful progressive action, its continued improvement in every department of knowledge. Everywhere in science the intellect of man is restless, and ever striving to accomplish fresh triumphs over her laws: never satiated with its vast achievements, its cry is still *onward*, in its search after new. It levels in its rapid stride all the obstacles which speculation or theory can create, and, marching ever on, fulfils in time even the prophet's vision or the poet's wildest dream. It has in our day covered with mighty engines alike the land and the sea, and on both has thus brought so near the distant nations of our race that the hands of civilization extend in one continuous grasp around the world; it carries from the frigid to the torrid zone the thoughts and the desires of man as quick as the lightning's flash, by guiding and controlling at its will the destructive element of the lightning's power. It has in our profession annihilated the pangs of physical pain—the cry of suffering which was coeval with the creation of man. It has thus given to surgery its greatest triumph, and to the sufferer his greatest boon. Twice blessed—in giving this immunity to the victim of the surgeon's knife, and causing *pleasure* to him as he wields it, from the knowledge that he inflicts no *pain*. And at last, if it has not by its lever

yet *raised* the globe, it has, while the world stood gazing with breathless solicitude at the issue, triumphed over the mightiest of elements, the ocean's strength and depth, and tied with its wire-nerves the Old World to the New, which, though they may be paralyzed for the present, are yet destined to send each pulsation of Europe's heart synchronous to our shores. Thus in man's never-ceasing toil after knowledge has the Psalmist's vision truly been fulfilled: "Their line is gone out through all the earth, and their words to the end of the world."*

It requires, then, no deep research to be satisfied that this spirit of improvement is abroad, and is constantly and steadily working great and salutary changes in the general face of affairs; and it would indeed be evincing great ignorance of the present state of medical science, not to perceive that it has most deeply felt the influence of this spirit, and most extensively participated in these changes. Within little more than half a century, its entire aspect has been changed. Branches in this time have arisen to importance which before were not understood, and others, which exercised but little influence over the progress of medicine, have become of the highest importance, the very basis of its advancement. Medicine has, in fact, assumed in the circle of the sciences a high and independent station. It is no longer a simple routine of measures, subject to visionary and ever-fluctuating theories of the imagination: it is a profound philosophy, whose principles can be determined and understood only by rigid induction and untiring investigation, and which can be put into successful practice only by means of close observation, extensive information, and a well-disciplined and discriminating judgment.

The science of medicine is indeed vast beyond the conception of the student; for it is more or less connected with most of the various ramifications of the natural sciences. The limited duration of human life, no less than the restrictions which an allwise Providence has placed upon all intellectual power, forbids that the mind of any man should grasp *all* the treasures of knowledge which it places before us. "Art is long and life is short," so sings the poet, and he who works the hardest and trims closest the midnight lamp in our science, indeed in every elevated science, will find that at the end of a life, however long and toilsome and well-spent, there are mines of knowledge whose ores have never yet been tested or explored by him; there are springs of learning and of truth that are gushing forth their never-ceasing streams, and yet of whose waters he has never tasted, at whose sources he has never slaked

* Psalm xix. 4.

his thirst. It was the contemplation of this grandeur of science which tempered the great mind of the immortal Newton, whose giant intellect could scale the starry vault of heaven, and draw forth, as if by inspiration, nature's most stupendous laws, and caused even him to exclaim, after a life of toil after knowledge, that "he felt like a child wandering along the shore of the mighty ocean of truth, picking up the shells and pebbles that lay scattered at his feet."

But do not suppose that in thus alluding to the vastness of science in general, and the immense field which is covered by the science of medicine alone, I intend for one moment to disparage the efforts of man to unravel its mysteries, to draw forth its truths. Far from it; for it is by the concentration of his energies upon the separate departments of science that he is enabled with certainty to obtain his triumphs over its laws. This is the key with which he unlocks her precious vaults and pours out her treasures before him with a lavish hand. The division of his energies—this is the true secret that enables him in his limited cycle of life to accomplish so much; *individual effort*, concentrated, well-applied, industrious, and undivided effort, working ever by that steady process which Lord Bacon has so ably demonstrated to be the only rational guide to the true acquisition of any form of knowledge that is really worthy of research; inductive effort, facts, derived from principles first well established—this is the talisman before which science bows down and acknowledges man to be her master and her lord.

Unroll the scroll of fame, look into the arcana of nature's simplest or her most gigantic laws, and you will find that whatever great achievement has been accomplished, whatever great discovery has been effected there, has been by individual effort, by concentrated devotion of time to the knowledge that may have been attained. Accident, it is true, may sometimes have thrown the flash of her torch to guide the seeker along the intricate path he may have been journeying, and may, in occasional glimmerings, have displayed the hidden gold; but it has generally been by the regular, steady, and concentrated strokes of the miner that it has been brought forth to the light of the world, and made current for the benefit of man.

Did time permit, I might refer to hundreds of illustrious yet familiar instances in support of these remarks. I might point you to Franklin, by the inductive concentration of the powers of his mind, disarming the thunderbolt of heaven of its terrors; or to Morse training it into submission to carry the thoughts of man on "the wings of the morning to the uttermost parts of the earth." I might point you to Davy, clad in the panoply of inductive science, with fire in his hand, walking un-

scathed, though surrounded by the elements of active combustion, even in the bowels of the earth; or to Fulton, or to Watt, silently contemplating the expansive power of vapor, and forming by induction from its *fleeting wreaths* an *iron chain*, which binds together alike the commerce and the civilization of the world.

But what need have we to wander from the paths of our science to seek for illustrious examples of the triumphs of individual minds over the intricate laws of the material universe? Turn to the pages of medical science, and look at the long array of the names that have in every age enriched it by their labors, and conferred incalculable benefit upon our race by their discoveries. Time would not permit us even to group together the constellation of intellects which, in all its departments, has shed light at every step, to guide us onward in the acquisition of its precious truths. It will suffice from among them to select one, upon whose wonderful discoveries are based the true and rational principles of all disease, and the influence of whose writings has illumined nearly every department that is deemed essential to the formation of a sound medical education.

All that can be said of *individual effort* may be found in the life of Xavier Bichat; and while the name of Bacon shall be acknowledged as the great expounder of the only true principles to the acquisition of general science, that of Xavier Bichat will live with it in medical science, resting upon the same broad basis of inductive philosophy, "throughout all time."

But little more than half a century has rolled by since Bichat published his immortal Treatise on the Membranes, and his Memoir upon Life and Death. Before his time the study of morbid anatomy had only been prosecuted at intervals, and in the most vague and unsatisfactory manner. Bonetus, it is true, at the close of the seventeenth century, endeavored to collect in a systematic manner the imperfect anatomical observations that had been made up to his time in regard to the causes and seat of disease; but his work was filled with erroneous theories; for all that existed of morbid anatomy in his day were a few isolated facts, almost lost in the voluminous works of theory and error to which they had been occasionally consigned. His labors, however, formed a point of departure for Morgagni, who, entering more profoundly into the views contained in them, and multiplying autopsic examinations, has transmitted to us a work replete with sound pathological views, drawn from the exact observations of nature. After Morgagni we find Walter, Sandifort, Licutaud, Portal, Vicq d'Azyr, Baillie, and a few others, contributing by some useful discoveries to augment the knowledge relative to pathol-

ogy. But their works, as well as those of Morgagni, can scarcely be considered more than memoirs—the disjointed fragments of the foundation scattered about promiscuously, which it required the hand of a master to collect and cement before the grand and systematic structure could be raised. Bichat saw this deficiency, and his vast mind, guided by the torch of physiology and inductive philosophy, classified the tissues of the human organization according to their analogies, and, having thus created *general anatomy*, he sought by every opportunity to elucidate their pathological states. Thus he may in truth be said to be the founder of the system which has since exercised so much influence upon the progress of medical science. What had been done before his time was disjointed, uncombined, and vague. His genius breathed upon the commingled elements, and system and order were produced. It drew together the few and feeble rays that were visible in the horizon, and, throwing upon them light from his own mighty intellect, he deduced fact after fact, and principle upon principle, until truth and form and harmony burst forth upon the profound obscurity, and the true principles of general anatomy, based upon the distinctions and sympathies of the tissues, were given to the world.

And let us look now for one moment at the influence which this system, conceived and perfected by *individual effort*, by the devotion and labor of one mind, has exercised over some of the most important departments of medical science.

Physiological medicine is, in fact, nothing more than the application of the principles derived from a knowledge of general anatomy, the system of Bichat, to the study of disease. Physiology itself makes us acquainted with the various uses and actions of those organs whose structure has been revealed to us by special anatomy. In other words, it is the natural history of the different functions and vital relations of the diverse parts of the organization in a state of health. Physiology, which is the science of healthy life, by explaining the functions of the various parts of the economy of man, and their relations with each other, unquestionably throws important light upon many morbid phenomena which we could not, without its assistance, comprehend. But it is hardly necessary that I should tell you that a knowledge of healthy phenomena alone will not enable you to understand morbid phenomena. There is a pathological life as well as there is a physiological life, and too surely you will find that the truths of the latter, if relied upon alone, will mislead you when in the presence of disease. It is only by understanding thoroughly the anatomy of texture, general anatomy, and the pathological conditions to which the various constituent textures of the organiza-

tion are subject, that we can comprehend the mysterious relations that are so often developed between the different organs of the system in their morbid state; which tells us how far they may be changed by abnormal action and still be able to carry on their functions, and when they must cease to act. If an important organ is suddenly and violently attacked by disease, how frequently does the whole system become deranged, and seem to be under the influence of new and inexplicable laws! Healthy or physiological functions are replaced by those of a pathological nature, and texture which, when in health, gave no symptom of its existence, gives out the cry of suffering, and becomes the most prominent feature of the disease; and often symptoms which are caused merely by the sympathy of tissues, become the most striking, and thus obscure from us the organ or the part which is really suffering.

It is in the midst of this trouble and commotion, when nature is wandering from her beaten track, that the true physician, relying on his knowledge of general anatomy, is able to discover the effects which are developed in the various textures of the body by a departure from order and health, and afterwards by his autopsic examinations endeavors to verify and prove his views by tracing these effects to their proper source. It is in this way, and in this way alone, that the truths of physiological medicine can be made known; a structure which, though yet obscured by the scaffolding that always accompanies the new and rising edifice, rests upon the firm foundation laid from the great discoveries of Bichat.

The practice of medicine, in fact, and every rational theory of disease, can only be derived from a thorough knowledge of the general anatomy of the tissues, and the deductions which are drawn from this knowledge by morbid anatomy. Select a disease, any disease that you please, and what is it? A problem, which you are called upon to solve, and the data that are before you to enable you to do this are the symptoms which it presents, some of which are evident to yourself, and others to the patient only; symptoms which, as has been truly observed, are the "expression of suffering" on the part of the organ which is affected. But how often do symptoms alone deceive us in regard to the solution of disease! How often do they mask and conceal from us by means of sympathy, as I have already said, or of similarity of function, the part or organ that is really in a morbid condition! How often do we see, by merely sympathetic influence, a morbid condition of the liver manifest itself by sympathetic symptoms at the shoulder, or an affection of the hip-joint express itself by suffering at the knee! Nothing, in fact, is more common in the animal economy than for an organ, when afflicted, to show it by symptoms in distant and sometimes more important parts of the system.

What is to guide you, amid this chaos of confusedly blended symptoms, in regard to the diagnosis you may wish to form? Can you rely upon descriptive anatomy to enable you to arrive at a correct result? However perfect your information may be here, however precise your knowledge of the human form, it is but a history of the relation of parts as they exist in the inanimate frame, after the vital spark has left the tenement; it is merely the science of the dead, inanimate machine. It does not explain to you one single principle of life; it tells you of the position, the size, and the relations of the various component parts of the human organization, but it does not present to you these parts animated and active; it does not show them to you fulfilling the different functions whose aggregate constitutes life; and, as I have already said, physiology, or the science of life, cannot alone guide you with its bright torch to the truth you are so anxiously seeking. Perhaps, however, you may suppose that you may be able to comprehend the nature of the morbid action when you have been enlightened as to the cause by which it has been produced, or you may think it sufficient to try your therapeutic agents, and watch the effects which are caused by their administration. To show how irrational such a course would be, and how uncertain in its results, I have only to remark, that the most dissimilar diseases often emanate from the same causes, and that there has always been the greatest discrepancy in regard to the causes of disease, for their origin is often involved in the most perplexing obscurity. From etiology, or a knowledge of the causes of disease, you may often draw prophylactic indications, but you may rest assured it will frequently mislead you if you rely upon it to ascertain the nature of disease. And if you trust alone to the therapeutic action of your remedies, you trust, in other words, to chance, and you descend at once to the level of the miserable empiric who, at hazard, administers his nostrums, and blindly hopes for success:

> "Who with his powders cures life's various ills,
> And, if they fail, then tries his patent pills."

But guided by a knowledge of general anatomy, and the established morbid conditions and sympathies to which the various tissues are subject, the pathologist no longer gropes about in the dark, and bestows upon mere symptoms names "expressive of some real *entity* which is called the disease." He no longer finds the practice of medicine a simple routine of measures, subject to the various and ever-fluctuating *theories* of the imagination; he no longer finds it a mere conjectural art, but a profound, a rational philosophy, resting upon the fixed and certain principles which experience has deduced, and observation is daily confirming, from the

labors of Bichat. We do not desire to detract from the merits of the great fathers in medicine who have preceded the period when the anatomy of the membranes was given to us to illumine in all future time the realms of medical truth; we do not wish to disparage the profound and accurate observations of the wonderful old man of Cos; or of Sydenham, the Hippocrates of England; or of Brown, or of Cullen, or of Boerhaave—"as bright an ornament to the human race as he was a glory to the profession of medicine," and who should live for ever in our grateful recollection if he had penned no more than that beautiful and humane sentiment, "The poor are my best patients, for God is their paymaster"—and many others who perhaps are equally entitled to our gratitude; but yet I say, and I say it without fear of contradiction from the true pathologist, that it were better for human life, and the innumerable sufferings which an allwise Providence has entailed upon it, that the writings of these minds and hundreds of others had never been known to us, than that the works of Xavier Bichat had been lost to the world.

Though they have shown by their writings that they were often close observers of nature and her laws, yet they all, more or less, invented theories to suit the operations of those laws, or else interpreted those laws so that they might accord with their theories. But Bichat constructed nothing by the imagination. Ever governed by the principles of the Baconian philosophy, he first established facts that were visible and tangible, facts by experiment, by dissection, and then from such facts he deduced principles that are insusceptible of change.

And what lessons may not be read by the student of medicine in the volumes of theory and error which have successively risen and fallen in former ages under the wild spirit of speculation! Teaching the principles of medicine at one time by the absurd dogmas of the various schools, and at another by the physical doctrines of mechanics, or even the visionary labors of the alchemists; giving rise alternately to the absurdities of humoralism, solidism, or vitalism, or, aided by superstition, seeking for explanations in the wilder regions of theosophy, magic, or astrology. Built upon the sands of the imagination, the billows of age after age has passed over them, sweeping them away for ever, "like the baseless fabric of a vision, leaving scarce a wreck behind."

But the structure which the genius of Bichat created stands firmer and stronger as the epoch which gave it birth grows more distant under the hand of time. It stands almost in the same beautiful simplicity as it came forth from his hands, resting upon the immutable principles of truth, which cannot change; *truth*, which may be slow in its development, the result only of patient and untiring deduction, but whose flame, when

once illumined, lasts through all time; the changing blasts of hypothesis may roar around it, and the ever-rising storm of theory may be poured upon it, but its effulgence only beams the clearer and the brighter and the stronger, for it burns upon the adamantine rock of nature's eternal laws!

Nor are the labors of Bichat less precious to the surgeon than they are to the physician. The time has passed for ever when surgery was restricted by conventional forms or envious distinctions to the mere drudgery of mechanical performances; the day is over when the surgeon was called upon to exercise merely his manual skill, while the decision requiring an operation, and the treatment afterwards to be observed, belonged by right to the physician. That era of surgical abasement is only now historical. It has long since ceased to exist, and he who would at this day enter successfully into the practical domain of surgery, must be both a profound pathologist and physician. The pathology of medicine and surgery is one and the same, subject to the same laws, and requiring the same principles of treatment. How would the surgeon undertake the treatment of any affection, or the performance of any difficult operation, unless he was perfectly familiar with the elementary composition of the part diseased, the lesions, and the changes and the sympathies, which could only be acquired by him from a thorough knowledge of the anatomy of texture, the anatomy of Bichat. Surgery, in fact, is, above all other branches of medical science, practical, I might in some respects say mathematical, in its objects. Unlike the results of medicine, which are but too often veiled in obscurity, those of surgery are visible, tangible, ever appreciable. Its appeal is direct to the senses, and its progress therefore is ever onward, unretarded by either the delusive doctrines of conscientious visionaries, or the designing views of the satellites of empiricism. Ignorance is at once unveiled if she dares to cross her threshold, and the man of mere imagination finds few grounds within her practical realms as a resting-place for his idle dreams.

Even special anatomy, the science which had been well known and taught for many centuries before the birth of Bichat; which had been brought, as was supposed, to such a condition of positive certainty, has derived incalculable advantages from the truths which general or elementary anatomy has revealed; for the latter is to the former what chemistry is to the other branches of natural science. As the chemist cannot truly comprehend a substance except when he can decompose and recompose it, or, in his own language, only after it has been subjected both to *analysis* and *synthesis*, so the anatomist does not really understand the human body until, after having studied separately and with great care each organ, and every system which forms a certain number of similar

organs, he can determine, not only the *relations* that he observes, but the *elementary* composition or texture of every organ, and, I might almost say, the proportion which it forms in the composition of our various members. It is in this precision of investigation that general anatomy, in its relation to the human frame, approaches in its certainty the sublime and beautiful science of the chemist in the natural sciences, and, by studying it in this light, the very elements of our animated existence are ascertained with the same certainty and reduced to the same simplicity and order as the primitive constituents of the inorganic world.

Such, gentlemen, have been some of the great results that have sprung from the writings of Xavier Bichat. In contemplating the wonderful influence and light they have shed over the realms of medical science, we can hardly imagine they could have been accomplished by the genius and industry of a single mind, in a life however long and laborious; and yet Bichat prepared his Treatise on the Membranes and his Memoir upon Life and Death while yet he was in the flower of his youth; for, alas for science, his light went out just as it had burst forth into the zenith of usefulness and fame. Nature, in the language of his biographer, "condemned to a premature death the inquisitive mind of one who followed her steps too closely and with too much ardor in the prosecution of her wonderful works." Worn out by intellectual labor and the dissecting-room, he fell a martyr in the cause of science at the age of thirty years, while the laurel of his fame was yet green upon his brow.

"And what a noble heart was then undone,
When Science' self destroyed her favorite son!
'Twas his own genius gave the final blow,
And served to plant the wound that laid him low.
So the struck eagle, stretched upon the plain,
No more through rolling clouds to soar again,
Viewed his own feather on the fatal dart,
And winged the shaft that quivered in his heart.
Keen were his pangs, but keener far to feel
He nursed the pinion that impelled the steel,
Whilst the same plumage that had warmed his nest
Drank the last life-drop of his bleeding breast."

I have thus endeavored to present to you, in the short but brilliant career of this young and wonderful man, an example of how much may be accomplished by *individual effort*, by concentration of the powers of *one mind upon one great purpose*. If you have caught the moral of my remarks, my object has been accomplished. If they shall incite you to devote your lives, to dedicate your energies to the discovery of new truths

to elucidate the difficulties which still envelop many of the phenomena of nature in disease; if they shall influence you to disregard all other pursuits, all trivial objects, and to consecrate your time and your thoughts and your talents to the studies which you are about to commence in this school; if they shall induce you to discard mere speculation and idle theory, and to master first and thoroughly principles before you attempt to apply them to practical results; if, in a word, they shall cause you to approach with humility the vast temple of medical science, but yet not with a faltering or doubtful step, to look up at it, not to despair at its extent, but with the determination by concentration of mental energy to reach, at some future day, its highest pinacle, my aim, gentlemen, has been accomplished.

It is indeed full time for young medicine to arouse itself, and to follow on in the path which the genius of Bichat has pointed out. There is yet much work by it to be done, for there "still remaineth much land to be possessed;" there are many of its most important principles still involved in the deepest obscurity and doubt; there are yet many diseases over whose treatment the dark cloud of empiricism still hangs; and there are yet many opprobria to be combated and overcome. It is the young and ardent lovers of truth, you, the students of this day, that may be destined, by noble exertions, under God's sustaining providence, to accomplish this great work; to discover new laws of disease; to develop new principles in its treatment; to clear away the remaining rubbish of antiquated routine that still blocks up some of the portals of the temple of medical science; and to add fresh and imperishable ornaments to its construction and immortal lustre to your names.

Such achievements may be the result of *individual effort;* but that effort must indeed be industrious and unceasing. If it is divided, the triumph can never be attained. Time misspent, or devoted to trivial pursuits, is so much abstracted from your working capital for ever, never to be recalled; and one false step in your efforts to reach those portals of the medical temple, will cause you to falter, and, it may be, to fail and to fall.

> "Facilis descensus Averni
> Sed revocare gradum, superasque evadere ad auras
> Hoc opus hic labor est."

Medicine, in fact, though eminently practical in all its aims, has felt too long and too deeply the influence of *false facts*, based upon mere theoretical opinions, and even at the present day it numbers many minds that are never at ease unless they are in the world of abstractions; who are inspired with the pen, but who are lost when in the presence of dis-

ease; generalizers, who are unable or unwilling to endure the slow and patient march by which truth is found; finding it easier to *invent* for nature rather than to *learn* from her teachings; for whom "an idea *à priori* is a point of departure, and one induction a principle demonstrated." Such may, in truth, be called the *poets* of our science, whose views, although they may dazzle by their brilliancy, or produce a sensation by their ingenuity, are in our profession, indeed in every practical profession, as evanescent as they are visionary. Like the phosphorescence that is turned up by ocean's wave, they glitter in the track of the noble bark as she courses on, but they emit no ray to warn her of the sunken rock, no light to guide her *onward* to the destined haven of her voyage.

Recollect that the language of nature only is oracular in medicine; and whatever principles you may see in books, whatever doctrines you may hear in lectures, whatever precepts you shall find advanced here in this school, test them well by experiment, by reflection, by the light of your own reason, and if you cannot comprehend them, do not receive them until you have proved them by further inquiry, by future investigation.

The science of medicine has had, too, in all ages, to contend, not only with the absurdities of the visionary, but likewise with the effrontery of the empiric. "Impostors," says Lord Bacon, "have always held competition with physicians, and quackery, therefore, always has been, and probably always will be, fostered by mankind." Credulity and the appetite for the new, together with the strength of the imagination towards effecting wonderful cures, are natural and inherent in mankind. In former ages they resorted to witches, magicians, and sorcerers, or, in other words, to cunning men and women, who treated their maladies by spells, charms, incantations, or cabilistic words; and in this, our own day, practical and utilitarian as it is, empiricism has made but little progress in its appliances and *modus agendi*, for doctrines as absurd and wild as ever were promulgated in the darker ages, when sorcery and magic held their sway, are openly advanced and boldly maintained among us, and the spirit of empiricism stalks openly abroad, scattering her delusions broadcast, not only among the ignorant, but among the intelligent and the educated; and as long as public credulity exists, with its craving for the marvellous, we must expect that the base and sordid aims of designing empirics will exercise their pestilential influence upon society.

It must be your duty ever to guard with a jealous and watchful eye the noble calling of the physician from the degrading contact of such a spirit as this, and, bearing high its standard above the influence of this empirical atmosphere, to keep it unblemished by its miserable pretensions, untarnished by its dangerous effrontery.

We welcome you, then, gentlemen, to these halls of learning, and to the studies which are to prepare you to discharge the duties of a most useful and noble profession. Your aspirations are indeed directed to a high and most gifted position, for you seek to become disciples at the altar of medical science; to examine and to comprehend and to regulate the delicate and intricate machinery of life; but in seeking this position, recollect that it is encompassed with responsibilities of a deep, aye, of a fearful character: responsibilities on which rest the strongest ties of society and its tenderest relations, which spring from the hopes of friendship and from the purest affections of domestic life; which may be seen through the gloom of the sick-room, and through the shades with which disease and suffering are surrounded; which may be heard in the throes of expiring life, and witnessed in the still, cold features of death.

Come, then, to the studies which are before you with a deep sense of the magnitude of the contract which will be formed between yourselves and your fellow-men, and with the determination to lay now well and thoroughly here in this school that foundation upon which you may base the power and knowledge to meet these responsibilities calmly and conscientiously hereafter. Approach them, not as belonging to a speculative, but to an eminently practical science; not as studies from which may be acquired a routine of superficial knowledge, that may enable you to make *merchandise* of the sufferings of your fellow-men, but as belonging to an elevated and inductive science, a profound philosophy, whose principles can only be acquired by the most persevering industry, and can only be truly practiced in a spirit of enlightened philanthropy.

Animated by such views, and sustained by such principles, you will become worthy to bear the honored title of physician; worthy of that eloquent tribute which the greatest of Roman orators has paid to the *true* physician: "Homines ad Deos nulla re propius accedunt quam salutem hominibus dando." Worthy

> "To run the great career of useful honor,
> To exalt your generous aims to all divinest deeds,
> To chase each partial purpose from your breast,
> And through the mists of passion and of sense,
> And through the tossing tide of chance and pain,
> To hold your course unfaltering; while the voice
> Of truth and virtue, up the steep ascent
> Of nature, calls you to your last reward,
> The applauding smile of Heaven."*

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* Akenside.